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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/664,581

09/17/2003

Charles E. Biss

270-109

3675

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07/05/2006

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EXAMINER

NGUYEN, KIMBERLY D

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,581

Applicant(s)

BISS ET AL.

Examiner

Kimberly D. Nguyen

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 24-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 24-39, 41 and 44-51 is/are rejected.
- 7) ☒ Claim(s) 40, 42 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/21/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

1. Acknowledgment is made of Amendment filed April 21, 2006.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "212" on page 13, line 11 of paragraph 52. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 40, 42-47 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

Art Unit: 2876

art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation “wherein each of said first and second imagers includes an illumination source...” as set forth in claim 40 was not found in specification and drawings. The limitation “...an alternate first section of said hollow chamber, and wherein said hollow chamber is configured so that said alternate first section can replace said first section” as set forth in claims 42 (or similar limitations in claims 43-46), which was not found in specification. The examiner had a hard time to find, for example “the alternate first section can replace the first section” or similar limitation with second section, and respectfully requests applicants to point out the specific page and line number(s) in the specification and/or drawings, wherein the limitation is supported.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, 24-39, 46-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng et al. (US 5,567,934; hereinafter “Zheng”) in view of Bockholt et al. (US 4,488,679; hereinafter “Bockholt”).

Re claims 1, 3-4, 7, 24, 35-39, 46-51: Zheng a self-aligning structure for use in measuring the quality of an encoded indicium (14 in fig. 1), comprising:

a hollow chamber (a shroud 20) comprising:

a first surface/section defining a first aperture (a bottom opening 24), the first aperture representing a viewing area of an imager used to obtain an image of the encoded indicium (the shroud having side walls, wherein the lower edges of the each side walls define the bottom opening, see col. 2, lines 59+; col. 3, lines 21+; and see figure 1);

a second surface/section defining a second aperture (a top opening 26), the second aperture configured to support the imager in a position to obtain the image of the encoded indicium (see col. 3, lines 21+., col. 3, lines 40+ and figures 1-2);

at least one source of illumination (an illumination apparatus device 80) situated within the hollow chamber (see figs. 1-2), the at least one source of illumination configured to illuminate the encoded indicium (see col. 4, lines 3+ and figures 1-2); and

an illumination control (a controller 110 or trigger circuit 85 in fig. 4) operatively coupled to control/monitor the at least one source of illumination (see col. 6, lines 23+);

the hollow chamber (10) configured to be positioned adjacent the encoded indicium that when the encoded indicium (14) is positioned within the viewing area (see figure 1; col. 2, lines 25-49), when the imager is supported in the second aperture (see figures 1-2), and when the at least one illumination source is properly controlled (col. 6, lines 23-39), the structure is self-aligned and the imager can obtain at least one image of the encoded indicium ("the structure is self-aligned" is interpreted as, for example, upon receipt of a signal from controller 110 which allows the illumination apparatus 80 and camera 40 to obtain image signal of the label 14; and

Art Unit: 2876

allows the camera lens to be adjusted to a minimum to provide the greatest depth of field (see col. 6, lines 23-53)), wherein the hollow chamber (10) is constructed in a plurality of mating sections (i.e., the hollow chamber is constructed by bringing-together/assembling/mating the mating sections/parts 40, 80, etc. (see figs. 1-2)), a first section comprising the first surface defining the first aperture representing the viewing area of the imager of the encoded indicium, and a second section comprising the second surface defining the second aperture configured to support the imager in the position to obtain the image of the encoded indicium (col. 3, line 21 through col. 7, line 30; col. 2, lines 25-64).

Zheng teaches that to obtain a quality of digital image, by the imaging device, is to minimize glares, shadows and non-uniformity in illumination on the coded surface of an object (col. 1, lines 36-47) and is to eliminate the illumination of the surface by ambient light (col. 6, lines 54-67); which contributes to obtaining better quality of the encoded indicium.

Zheng does not specifically disclose the quality of the encoded indicium can be measured.

Bockholt discloses a code reading system including a hollow chamber (an exterior enclosure) configured to shut out ambient light when the chamber is positioned adjacent the encoded indicium, a light system, an image sensor (such as a photo diode, photo-transistor, or CCD) within the enclosure, an optical sensing means to signal approximate or coarse alignment of the reader with respect to the data field being read, and a switch to activate the entire system once a reader has been properly placed on and aligned over the material to be read. Fine alignment of the code with respect to the reader is handled by firmware contained within the microprocessor system associated with the reader (see col. 2, lines 4+). When the hollow

Art Unit: 2876

chamber configured to be positioned adjacent the encoded indicium (i.e., when the encoded indicium is positioned within the viewing area), the structure is self-aligned and the imager can obtain at least one image of the encoded indicium from which image the quality of the encoded indicium can be measured based on the satisfactory alignment with the code being read (see col. 4, lines 10+).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the imager of the self-aligning structure which image the quality of the encoded indicium is measured based on the satisfactory alignment with the code being read, as taught by Bockholt, in the system of Zheng, in order to improve the quality of the code reading and to reduce any possible errors or factors to promote errors (such as glares, shadows, and/or ambient light) in the reading process by the apparatus. Furthermore, the examiner respectfully submits that the presently claimed limitations, such as the limitations as set forth in independent claim 1, given its broadest reasonable interpretation, are not structurally distinguished from the prior art of record.

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. See *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997).

Re claim 2: Zheng teaches wherein the hollow chamber (10) is configured to exclude extraneous illumination (e.g., ambient light, shadows, glares, etc.) when the imager is present and the hollow chamber is positioned adjacent the encoded indicium (col. 6, lines 54-67; col. 1, lines 36-47).

Re claim 5: Zheng teaches wherein the defined position comprises a define angle (col. 4, lines 30-40; col. 6, lines 4-9).

Re claim 6: Zheng's hollow chamber (10) certainly is constructed so that the second section (26) is to be disposed on top of the first section (24; see fig. 2).

Re claims 8-9, 25-28, 30-32: Zheng teaches wherein the hollow chamber further comprises an optical sensor (CCD) configured to receive illumination from the at least one source of illumination for the purpose of confirming an illumination characteristic provided by the at least one source of illumination (col. 4, lines 55-65; col. 6, lines 10-22).

Re claim 29: Zheng teaches an image quality verifier system useful for verifying the quality of an encoded indicium (14) comprising

an imager (40) for obtaining an image of the encoded indicium;

at least one source of illumination (80) for illuminating the encoded indicium, wherein the system is configured to detect light from the at least one source of illumination for the purpose of confirming an illumination characteristic of the at least one source of illumination.

Re claim 33: Zheng teaches wherein the system includes an illumination detector (85; col. 6, lines 33+) separate from the imager for detecting illumination from the at least one source

Art Unit: 2876

of illumination for the purpose of confirming an illumination characteristic of the at least one source of illumination.

Re claim 34: Zheng teaches the light illumination/intensity is controlled substantially entirely by the controller 110 and/or trigger circuit 85 to reduce specular reflection (col. 6, lines 24-66).

Allowable Subject Matter

7. Claims 40, 42-43 are objected to be allowable if rewritten or amended to overcome the rejection(s) as set forth in the Office action.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach wherein each of the first and second imagers includes an illumination source so that the source of illumination of the system for illuminating the encoded indicium can be provided by the first or second imagers, whichever is supported by the structure.

Conclusion

Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly D. Nguyen whose telephone number is 571-272-2402. The examiner can normally be reached on Monday-Friday 7:30-4:30.

Art Unit: 2876

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 571-272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KDN
June 26, 2006

A handwritten signature in black ink, appearing to read 'KDN', with a long horizontal flourish extending to the right.